PROJECT/ACTIVITY TITLE: Los Alamos County Department of Public Utilities Proposed New Easement for the Construction and Operation of a Switchgear Substation, ,an Underground Duct Bank including Electric Lines and Related Utility Appurtenances	**Accession No:** 22497 **PRID No:** 15NP-0120	**Date:** March 3, 2017
PURPOSE: The Los Alamos County Department of Public Utilities (LACDPU) is requesting an easement from the National Nuclear Security Administration's Los Alamos Field Office (NA-LA) for the construction of the Los Alamos Switchgear Substation, an underground duct bank including electric lines and related utility appurtenances . The new easement is necessary as LACDPU is in need of a second substation to meet the present and future electrical load requirements for the Los Alamos town site; to relieve load from the *Townsite Substation* in the event of express electrical feeder line failures; and to provide new electrical line feeder redundancy in the event of a major existing electrical line feeder or substation failure in the Los Alamos townsite. The connected non-Federal action is the construction and operation of the new LACDPU Switchgear Substation and associated utility appurtenances.		
Location: The proposed new Switchgear Substation site is within LANL's Technical Area (TA) 3 between the Landfill fence and East Jemez Road and the electrical conduct system is within TA-3 and TA-43 – See Figures 1 and 2.	**NA-LA Project Manager**: Cassandra Begay, NA-LA Utilities & Sustainability Program Manager, (505) 665-4246	
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COVERAGE: Department of Energy National Environmental Policy Act Implementing Procedures 10 Code of Federal Regulations Part 1021, Appendix B to Subpart D of Part 1021—Categorical Exclusions Applicable to Specific Agency Actions: **B1.24 Property Transfers** Transfer, lease, disposition, or acquisition of interests in personal property (including, but not limited to, equipment and materials) or real property (including, but not limited to, permanent structures and land), provided that under reasonably foreseeable uses (1) there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment and (2) the covered actions would not have the potential to cause a significant change in impacts from before the transfer, lease, disposition, or acquisition of interests. ***Non-Federal Connected Action*** **B4.11 Electric Power Substations and Interconnection Facilities** Construction or modification of electric power substations or interconnection facilities (including, but not limited to, switching stations and support facilities) that are not for the interconnection of a new generation resource into a Power Marketing Administration's transmission system, unless: (1) The new generation resource would be eligible for categorical exclusion under this part and (2) the new generation resource would be equal to or less than 50 average megawatts.		

BACKGROUND

The Los Alamos (LA) townsite area is served by a single electrical substation "*Townsite Substation*" owned by LACDPU and powered by two 8,000 foot underground express feeders called TC1 and TC2. TC1 and TC2 are operated and maintained by LANL personnel and are installed in a common duct bank traversing Los Alamos Canyon in approximately 10 manholes. The *Townsite Substation* provides electrical power to the Los Alamos (LA) townsite via 6 distribution feeders. The LA townsite consists of approximately 6000 customers, all the commercial businesses, most of the LA Municipal facilities, and most of the LA Schools. Individually, TC1 and TC2 are supposed to carry the entire electrical load for the LA *Townsite Substation* in the event of a single TC feeder failure. In the last 24 months, there have been two TC2 Feeder failures lasting 7 days and 10 days respectively; in both occasions the TC1 feeder did carry the entire townsite electrical load. However, under LACDPU electrical peak conditions, the townsite electrical load has exceeded the single TC feeder thermal rating. The calculations were based on past usage and does not include the future and potential load growth in LA County. Of equal concern is the potential electrical failure to a TC feeder then flashing-over and damaging the other TC feeder as the TC feeders lay side by side in the same duct bank system. The past TC2 feeder failures occurred while the manhole was full of water; otherwise, there could have been damage to TC1.[1]

DESCRIPTION OF PROPOSED ACTION:

The Proposed Federal Action is for NA-LA to issue an easement for the construction of the Switchgear Substation an underground duct bank including electric lines and related utility appurtenances. . There is no direct environmental effect from this proposed action.

The proposed new easement would result in Los Alamos County constructing and operating a new Switchgear Substation and associated utility appurtenances. . The substation and the associated utility appurtenances would be owned and operated by LACDPU. LACDPU anticipates using Switchgear Substation to power other non-LANL and County loads (LA Medical Center, Elk Ridge, etc.) and alleviate the use of LANL electrical feeder lines as much as practical. This is aligned with the slow separation of and acquisition of the LANL electrical distribution systems that serve non-LANL loads (Bandelier National Monument, San Ildefonso Pueblo, etc.) and Los Alamos County loads (wells and pump stations).[1]

[1] Los Alamos County, Department of Public Utilities correspondence from Rafael De La Torre, PE, Deputy Utility Manager – Electric Distribution to Mr. [sic] Jody Pugh, Acting Assistant Manager for National Security Missions. Reference: LASS Substation and corresponding Feeders. April 15, 2015.

The Switchgear Substation would be located next to the LANL electrical feeder lines (TC-1 and TC-2) that power non-LANL and County loads including the: transfer station, LA transit mix, Elk Ridge Mobile Home Park, and LA Medical Center (Figures 1 and 2). These LANL feeders (TC-1 and TC-2) would be re-routed and fed from the Switchgear Substation and will be owned and operated by LACDPU. New outgoing electrical feeder lines from the Switchgear Substation would be constructed, tied, and integrated to existing electrical feeder line networks. With the exception of the proposed Switchgear Substation, the remaining easement requests are within existing DOE utility corridors and duct banks. The Switchgear Substation will be powered by the previously approved and future LANL TA-3 Substation[2] that was designed to provide power to LANL and Los Alamos County via two new electrical express electrical feeder lines. LACDPU intends to start the Switchgear Substation construction project within the same time-frame as LANL's new TA-3 Substation Replacement Project.

[2] A categorical exclusion was issued for the *TA-3 Substation Replacement Project* on February 17, 2016 (PRID:09P-0059 V2). At that time a request had not been received to conduct a NEPA analysis on the lease modification (Request). Had the Request been received the two projects [TA-3 Substation Replacement Project and the subject of this NEPA Determination] would have been evaluated simultaneously with the analysis taking a hard look at potential cumulative impacts. This NEPA determination has done so and concluded that there are no extraordinary circumstances related to either one of the proposed actions and that the applicable categorical exclusions would have been and are still applicable to each separately or in combination.

Figure 1: Location of the Proposed Switchgear Substation and Electrical Conduit Easements

Figure 2: Location Map for the New Switchgear Substation (Red line) and Electrical Easements (yellow line)

IMPACT ASSESSMENT

Table 1 is a synopsis of the potential direct effects from LACDPU construction and operation of the Switchgear Substation and related infrastructure to the human environment.

Table 1. Environmental Factors Checklist

Environmental Factor	Analysis
Land Use	Compatible with current land use.
Visual	Switchgear Substation construction and operations would not introduce new visual elements. Structure would be compatible with current land use.
Geology and Soils (geologic hazards, soil productivity, capability, erodibility, and mass failure)	No special considerations. Best Management Practices would be implemented during construction to minimize erosion.
Water (surface and groundwater quality and quantity, groundwater recharge, streamflow regimes)	There would be no effect to surfac and groundwater quality and quantit groundwater recharge, streamflo regimes. The LACDPU project scope of wo may require coverage under a Nation Pollutant Discharge Eliminatio System Construction General Perm for Storm Water Discharge and a associated Storm Water Pollutio Prevention Plan.
Non - radiological Air Quality	No air emissions permit is anticipate
Radiological Air Quality	N/A
Noise	Construction noise would be localize and temporary.

Environmental Factor	Analysis
Ecological (floodplains, wetlands, threatened or endangered species and habitat, migratory birds)	No floodplains or wetlands are present in the proposed constructior areas. The affected areas are not in threatened or endangered species habitat. Construction will occur in previously disturbed and developed areas and would have little effect on wildlife. Approximately 12 trees on the proposed substation site may have to be removed. If removed prio to migratory bird breeding and nesting season – prior to May - there would be no migratory bird issues. However, if tree removal is delayed until the start of the breeding seasor a survey would have to be conductec by LANL biologists prior to tree removal. Should nesting birds be present tree removal would be delayed until after breeding and nesting season. LACDPU would be responsible for the removal and disposal of the trees.
Human Health – Radiological Impacts on the Public	N/A
Human Health – Chemical Impacts on the Public	N/A
Human Health – Worker Health	LACDPU would be responsible for a comprehensive program to ensure environmental protection, and the health and safety of workers and the public would be in place prior to construction and throughout operation.

Environmental Factor	Analysis
Cultural Resources (archeological and historical)	***Cultural Resources:*** Cultural sites would not be affected by the proposed LACDPU construction. If an buried archaeological resource, remains, or items of cultural significance are encountered during construction, site activities would cease until the significance of the items could be determined by a qualified archaeologist, and appropriate actions taken. ***Historic Resources:*** No historic resources will be affected by the LACDPU proposed project.
Socioeconomics	Reliable electrical power infrastructure would be beneficial fo LANL and LA County.
Infrastructure (roads, utility corridors, communications systems, energy & fuels, distribution systems, and water)	Necessary infrastructure is present t support the construction effort.
Waste Management	LACDPU would be responsible for ensuring that all waste will be managed in compliance with applica environmental requirements and regulations.
Transportation	Very minor increase from construction traffic.
Environmental Justice	N/A
Facility Accidents	LACDPU would be responsible for ensuring that Safety and health activities are planned and implemented over the full life cycle o the project to ensure that the facility design incorporates features that demonstrate the facility can be built and operated in a manner that protects workers, the public, and the environment.

CONCLUSION

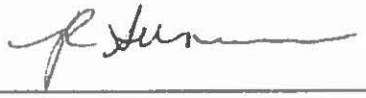
Construction of the Switchgear Substation and related infrastructure are not for the interconnection of a new generation resource into a power marketing administration's transmission system. Based on this NEPA

determination analysis, there are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects or threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders. Consequently, no further NEPA analysis is necessary or required.

NEPA Determination

Based on my review of the Proposed Action, as the National Nuclear Security Administration's Los Alamos Field Office (NA-LA) NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the Proposed Action as described herein, falls within the DOE NEPA Implementing Procedures listed in 10 CFR Part 1021, Subpart D, Appendix B 10 CFR Part 1021, Appendix B to Subpart D of Part 1021— Categorical Exclusions Applicable to Specific Agency Actions: *B4.11 Electric Power Substations and Interconnection Facilities.*

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects or threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or executive orders. If changes are made to the scope of the action so that it is no longer bounded by the enclosed description, or the project is changed to encompass other actions, NEPA requirements for the action will need to be reassessed at that time and further analysis may be required.

NA-LA NEPA Compliance Officer: Jane Summerson	**Date:**
Signature: 	3/6/17